Wafer Screening Software Organization (Versioning) in CVS

V 1.1
Vitaliy Fadeyev
January 16, 2002

The CVS depository contains both online and offline parts of the software. Everything is stored in a global directory *WaferSoftware*. The online is placed in *analysis* (further divided into *Unix* and *Windows* parts). Everything else pertains to the offline.

There are several versions of the software maintained. Usually, in case of a "big" change, new version gets its own CVS branch. The latest ones are listed in the following table.

Branch Name	***Comment***	***Software Version***	***Comment***
vf_aug10_optim_time	Used in production screening until now.	5	500->200 events/analog point
main_production	Used in qualification screening	7.1	I/O data structures
		7.2	3 histos for strobe scan
		7.3	fixes to Run.cpp, Chip.h
		7.4	enhanced backward compatibility; proper timewalk; TV7
mainstream_production	Intended for the rest of the screening	7.5	Added 4th strobe delay histogram

The software version is a global number for all software parts. It has two parts -- the data structure number and the software version for that data structure. So, version 8.1 would correspond to the data structure version 8, software revision 1.

The numbers can be cross-checked in two ways:
-- they appear in "#define" keywords near the top of the file FileIO.h (in any of those identical files, for example WaferTester/src/FileIO.h),
-- from "Help" menu of the online GUI (starting with version 7.1 only).

The typical sequence of commands to check out a branch NameX (i.e. the latest software revision within that branch) would be:

```
prompt> cvs -d":pserver:wafer@vostok-lnx.lbl.gov:/usr/local/cvsroot" login
prompt> cvs -d":pserver:wafer@vostok-lnx.lbl.gov:/usr/local/cvsroot" checkout  -P -r NameX WaferSoftware
prompt> cvs -d":pserver:wafer@vostok-lnx.lbl.gov:/usr/local/cvsroot" logout
```

Here, "-d" points the cvs to the depository internet location and the access method. "login" and "checkout" are the instruction to the CVS. "-r NameX" points to the branch named "NameX". The "WaferSoftware" is the module to be checked out (the actual name of our module).

After the first command, the cvs will prompt the user for a password. If the password is correct, then "nothing happens". After the second command, the directory "WaferSoftware" should appear in the users's current path.

The rest of this document contains three e-mails from Carlos, which contain useful infomation for getting started (beware that some information may be outdated).

From : Carlos Lacasta Llacer <Carlos.Lacasta@hal.ific.uv.es>
Date : Friday, March 9, 2001 8:00 am
Subject : CVS release of the Wafer software

Hello everybody,

I have put the wafer screening software under CVS to make it easier to handle. It would be nice if you could check it out (in the cvs sense) and give me some feedback (I do not expect to have everything properly set at the first try...)

The current version of the code is, essentially, the same as the one I released in a big zip file sometime ago, plus a number of minor modifications that I received from Vitaliy and the code needed by the Santa Cruz prober. (Note for them: if you check out this from CVS, you will need to add SCIPP in the list of preprocessor definitions in the project->settings->C/C++ menu, to activate the code for your prober).

To access the code by CVS, the repository is

:pserver:wafer@hal.ific.uv.es:/u/lacasta/CVS

you will have to login first (abcdxt):

cvs -d ":pserver:wafer@hal.ific.uv.es:/u/lacasta/CVS" login

and then checkout the WaferSoftware module

cvs checkout WaferSoftware

If you are "living" in Windows, the best is probably to get (if you still do not have it) WinCvs from http://www.wincvs.org/

I have added a Macros directory in the analysis folder. The idea is to put there the macros to analyze the data as soon as they are ready and stable for the new data format.

As you will discover, some problems will pop up at the beginning, but if we manage to set it up properly (you send me feedbacks and I make changes) it will become a stable repository and then we will have the latest code always accesible, no need anymore to send huge zip files, and if some corrections are needed or new ideas are implemented in the future, you could add them yourselves and make them available to the rest of people.

Carlos

From: Carlos Lacasta Llacer <Carlos.Lacasta@hal.ific.uv.es>
Date: Wednesday, June 13, 2001 11:07 am

Greetings,

I have made the, hopefully, last major change in the repository. I have added the Unix tarball for the offline analysis software and restructured the directories in the repository. If someone dares to give it a try a complete checkout of the module might be necesary:

```
cvs -z9 checkout -P WaferSoftware
```

remember that the repository is

```
:pserver:wafer@hal.ific.uv.es:/u/lacasta/CVS
```

Installation of the online stuff is as before. ** Important ** I made some fixings on Probe.cxx and I would like someone to check whether it does what it is expected to do or not... I cannot test too much from here...

Installation of Offline software is:

o) for windows, just like before, but now the module is
WaferSoftware/analysis/Windows

o) for Unix:
go to the directory WaferSoftware/analysis/Unix,
read the INSTALL file and then type

```
configure [any other flag you feel is needed according
to wht you read in INSTALL]
make
make install
```

If you just typed configure, things will try to get installed if /usr/local. In order to do so you need to be superuser. If that is not possible, type

```
configure --prefix=my_path
make
make install
```

Things will then get installed in
my_path/include
my_path/lib
my_pat/bin

This procedure works, for sure, under Linux. It should also work under other platforms. If you experience any problem, please let me know, since some fine tuning in the ocmpiler options may be needed.

Remember to add my_path/lib to LD_LIBRARY_PATH (in Linux, or equivalent in other systems...) so that the shared libraries get loaded dynamically. You may also need some editing in $HOME/.rootrc Concerning the Offline software, as it is right now in CVS does not include all the improvements that Wojtek is working on these days. That will be released when they are

ready. The main purpose of this release is to check that everybody can
install things with the new scheeme.

This release does not have the last_stable tag on it, since although it is the last,
I bet it is not stable yet... In case of total disaster, checking out the version with
last_stable tag on it should bring you back to the old situation...

Uffff,

Carlos.

From : Carlos Lacasta Llacer <Carlos.Lacasta@hal.ific.uv.es>
Date : Thursday, June 21, 2001 1:25 am
Subject : CVS back in production...

Hi,

Now that Max and Felix found the problem with DDE, I dare to say that the
last modifications in the software are in CVS (Ws18) together with the
latest offline analisis stuff.

So, now the status is back to normality (I hope). This is how the CVS code
looks like now for tag new_directory_structure. This tag is not yet set as
teh "latest_stable" until we all feel confident... (I will need feddback
for that).

```
WaferSoftware
  |
  +--- Tester
  |    +--- DACs
  |    +--- Scan
  |    |    `--- src
  |    +--- HybScan
  |    |    +--- Debug
  |    |    `--- src
  |    +--- TestVectors
  |    +--- Verilog2Tester
  |    `--- lib
  |         `--- src
  |              `--- save
  +--- Tools
  +--- WaferTester
  |    +--- Config
  |    +--- Debug
  |    +--- Release
  |    +--- res
  |    `--- src
  +--- analysis
  |    +--- Unix
  |    |    +--- ROOT
  |    |    +--- bin
  |    |    +--- scripts
  |    |    +--- wafer
  |    `--- Windows
  |         +--- Functions
  |         +--- Macros
  |         +--- Wafer99
  |              +--- utils
  |              +--- doc
  +--- doc
```

To access the whole thing and get it into a new working directory

```
cvs checkout -z3 -P -r new_directory_structure WaferSoftware
```

together with any other cvs checkout options you need to include.

If you are only interested in one of the submodules, for instance,
the online code:

cvs checkout -z3 -P -r new_directory_structure WaferSoftware/WaferTester

On the contrary, if you want to "update" your working directory:

cd to the directory just above WaferSoftware and then
cvs update -z3 -P -R -d -r new_directory_structure <the module>

Although it is not yet the "last_stable", it already incorporates a
branch: Wojtek_June_20_branch. The branch affects the modules
o) WaferSoftware/WaferTester (It has the equivalent to Ws18).
o) WaferSoftware/Tester/lib (").
o) WaferSoftware/analysis/Unix (it has latest updates from Wojtek).

Since WaferTester depends on the VME library, before getting that one, you
need to get Tester/lib and build it. To access those modules from the
branch into a new working directory:

cvs checkout -z3 -P -r Wojtek_June_20_branch <the module>

or if you want to update your working directory

cvs update -z3 -P -R -d -r Wojtek_June_20_branch <the module>

For the analysis code, the branch has, again, restructured a little bit the
files, on a request from Wojtek and also includes the code for the old CERN
setup. To get it

cvs update -z3 -P -R -d -r Wojtek_June_20_branch WaferSoftware/analysis/Unix

The directory tree is as follows:

```
WaferSoftware/analysis/Unix
  |
  +--- ROOT             (builds libFunctions.so)
  +--- scripts
  +--- wafer            (builds libWaferTester.so)
  +--- programs         (builds DumpData mkdst tstWafer)
  |    `--- oldCERN     (builds DumpData_oldCERN mkdst_oldCERN tstWafer_oldCERN)
  `--- waferOldCernSystem (builds libWaferOldCERN.so)
```

To build it, read the INSTALL file and then

```
configure
make
make install
```

Like that it will install it in

```
  /usr/local
       -> include (the headers)
-> bin    (the programs)
-> lib    (the shared libraries)
```

If you want another install directory, use the --prefix option in configure.

If the thing works "smoothly" we can tag it as "last_stable" in the main
trunk.

I think that's all for the moment,

Cheers,

Carlos